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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/593,668	05/01/2007	Neil Buxton	3711-000121/US/NP	2798
27572	7590	04/29/2010	EXAMINER	
HARNESS, DICKEY & PIERCE, P.L.C.			ROCHE, JOHN B	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/593,668	Applicant(s) BUXTON ET AL.	
	Examiner JOHN B. ROCHE	Art Unit 2184	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 January 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 3-7, 9-13 and 15-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over "Microsoft Device Driver for Symbios Logic ATA/ATAPI-to-1394 Controller Included in Microsoft's New NT5 Beta DDK Release, 10/6/1997," hereafter referred to as Microsoft'997, in view of Harris et al. (US 2002/0081873), hereafter referred to as Harris'873.

Referring to claim 7, Microsoft'997 teaches a host apparatus arranged to transmit commands to an external storage medium device connected to the host apparatus over an external databus which is arranged in accordance with one of the IEEE 1394 standard and the Universal Serial Bus standard, the host apparatus comprising: a command bus and a command interface arranged in accordance with one of the ATA/IDE standard and the

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Serial ATA standard for transmitting commands to a storage medium device over the command bus (ATA commands transmitted through 1394-to-ATA bridge via SBP-2 protocol, paragraph 3, lines 2-5); and at least one integrated circuit chip connected to the command bus and having terminals for connection to the external databus (SYM13FW500 ATA/ATAPI-to-1394 controller, paragraph 1, line 1); and to supply the converted commands to the terminals for connection to the external databus (controller contains capability for an external PHY, paragraph 4, lines 6-7).

Microsoft'997 does not appear to explicitly teach the integrated circuit chip having an interface arranged to convert commands received from the command bus in a format in accordance with one of the ATA/IDE standard and the Serial ATA standard into a format in accordance with said one of the IEEE 1394 standard and the Universal Serial Bus standard; rather, it teaches conversion in the opposite direction (1394-to-ATA bridge, paragraph 3, line 5).

However, Harris'873 teaches an integrated circuit chip (bridging chip 100 as seen in figure 2 and paragraph 16, lines 5-6) having an interface (bridging chip provides bridging circuit, paragraph 16, lines 5-6) arranged to convert commands received from the command bus in a format in accordance with one

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of the ATA/IDE standard and the Serial ATA standard (ATA/ATAPI signals, paragraph 16, line 3) into a format in accordance with said one of the IEEE 1394 standard and the Universal Serial Bus standard (USB signals, paragraph 16, lines 4-5).

Microsoft'997 and Harris'873 are analogous art because they are both drawn to the same field of endeavor of the conversion of data from one protocol to another.

At the time of the invention, it would have been obvious to one of ordinary skill in the art, having the teachings of Microsoft'997 and Harris'873 before him or her, to modify Microsoft'997's integrated circuit chip to include an interface arranged to convert commands received from the command bus in a format in accordance with one of the ATA/IDE standard and the Serial ATA standard into a format in accordance with said one of the IEEE 1394 standard and the Universal Serial Bus standard, as taught in Harris'873, because conversion between protocols is well understood in the art.

The motivation to combine these teachings would have been to enable mass storage applications to benefit from the speed and versatility of the USB protocol (paragraph 5, lines 2-4).

Therefore, it would have been obvious to combine the teachings of Microsoft'997 and Harris'873 to bring about the

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invention as claimed above.

Note that claims 1 and 13 contain the corresponding limitations of claim 7 as shown above; therefore, they are rejected using the same reasoning accordingly.

As to claim 9, Microsoft'997 anticipates a host apparatus according to claim 7, wherein said one of the ATA/IDE standard and the Serial ATA standard is the ATA/IDE standard (ATA device, paragraph 3, line 4).

Note that claims 3 and 15 contain the corresponding limitations of claim 9 as shown above; therefore, they are rejected using the same reasoning accordingly.

As to claim 10, Microsoft'997 anticipates a host apparatus according to claim 7, wherein said one of the IEEE 1394 standard and the Universal Serial Bus standard is the IEEE 1394 standard (1394 command sets, paragraph 3, lines 2-3).

Note that claims 4 and 16 contain the corresponding limitations of claim 10 as shown above; therefore, they are

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rejected using the same reasoning accordingly.

As to claim 11, Microsoft'997 anticipates a host apparatus according to claim 10, wherein said one of the IEEE 1394 standard and the Universal Serial Bus standard is the IEEE 1394 standard including a Serial Bus Protocol (SBP-2, paragraph 3, line 1).

Note that claims 5 and 17 contain the corresponding limitations of claim 11 as shown above; therefore, they are rejected using the same reasoning accordingly.

As to claim 12, Microsoft'997 anticipates a host apparatus according to claim 7, wherein the interface of the integrated circuit chip comprises: a first layer arranged in accordance with said one of the ATA/IDE standard and the Serial ATA standard to receive commands from the command bus (ATA device, paragraph 3, line 4); a second layer arranged to convert commands output from the first layer into a format in accordance with said one of the IEEE 1394 standard and the Universal Serial Bus standard (1394-to-ATA bridge, paragraph 3, line 5); and a third layer arranged in accordance with said one of the IEEE 1394 standard and the Universal Serial Bus standard to transmit the converted commands over the external databus (SBP-2 protocol

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embedded in the controller, paragraph 3, lines 1-2).

Note that claims 6 and 18 contain the corresponding limitations of claim 12 as shown above; therefore, they are rejected using the same reasoning accordingly.

2. Claims 2, 8 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Microsoft'997 in view of Harris'873 as applied to claim 7 above, and further in view of Hatano (US 2002/0002645), hereafter referred to as Hatano'645.

As to claim 8, Microsoft'997 and Harris'873 do not appear to explicitly teach a host apparatus according to claim 7, wherein the host apparatus is a digital television receiver apparatus.

However, Hatano'645 teaches the host apparatus according to claim 7, wherein the host apparatus is a digital television receiver apparatus (1394 bus may couple a digital broadcast receiving device and a digital television, paragraph 5, lines 5-7).

Microsoft'997 and Hatano'645 are analogous because they are both drawn to the same inventive area of conversion between interface protocols.

It would have been obvious to one of ordinary skill in the art at the time of invention to modify Microsoft'997's system to incorporate, as taught by Hatano'645, the host apparatus according to claim 7, wherein the host apparatus is a digital television receiver apparatus because in such devices conversion between signal interface protocols is common, such as in "digital cable" boxes that are connected to analog televisions.

The motivation to combine these teachings would have been to provide reliable communication and control among electronic devices coupled through different types of interfaces (paragraph 15, lines 1-4).

Therefore, it would have been obvious to combine the teachings of Microsoft'997 with the teachings of Hatano'645 to bring about the invention as claimed above.

In response to Applicant's argument that the Examiner has utilized an excessive number of references, it has been held that the number of references does not have a bearing on the propriety of the rejection; theoretically such could be infinite. *Ex parte Fine*, 1927 C.D. 84 (1926).

Note that claims 2 and 14 contain the corresponding limitations of claim 8 as shown above; therefore, they are rejected using the same reasoning accordingly.

Response to Arguments

3. Applicant's arguments filed January 27, 2010 have been fully considered but they are not persuasive.

Applicant argues in reference to independent claim 7 that Microsoft'997 does not explicitly disclose a host apparatus with which the SYM13FW500 controller is used, and teaches providing the controller in a storage medium device. (argument located on page 11 of 17, lines 4-11)

Examiner respectfully submits that a host apparatus is implied in the disclosure of Microsoft'997 the conversion of the protocol commands, and therefore the placement of the controller to that end, could just as obviously be in the apparatus itself as opposed to the device connected to the apparatus, as is common in the art.

Further, Applicant argues that Microsoft'997 does not teach the controller as being connected to the command bus of the host apparatus. (argument located on page 11 of 17, lines 12-19)

Examiner respectfully submits that the controller is adapted to accept commands, and could just as obviously be in the apparatus itself as opposed to in the device connected to said apparatus, as cited in reference to the issue of the location of the controller above.

Further, Applicant argues that Microsoft'997 does not teach an interface arranged to supply converted commands to the terminals for connection to the external databus. Particularly, Applicant argues that Microsoft'997 converts commands in the opposite direction of the invention (argument located from page 11 of 17, line 20 - page 12 of 17, line 8)

Examiner respectfully submits that the 1394-to-ATAPI bridge is intended to convert commands and to supply the commands to both the device and the host apparatus. Further, Examiner respectfully submits that one of ordinary skill in the art could provide for command conversion in the opposite direction as necessary.

As to Harris'873, Applicant argues that Harris'873 does not teach converting commands from a format in accordance with the ATA/Serial-ATA standard to a 1394/USB command. Applicant argues that Harris'873 merely converts data signals, rather than commands. (argument located from page 13 of 17, line 19 - page 15 of 17, line 12)

Examiner respectfully submits that commands can be transmitted as signals in a similar manner.

As to the remaining independent claims 1 and 13, Examiner respectfully submits that the corresponding limitations of claim 7 apply to these claims as shown above.

Conclusion

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JOHN B. ROCHE whose telephone number is (571)270-1721. The examiner can normally be reached on 8:30 am - 5:00 pm, M-F EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Henry Tsai can be

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reached on 571-272-4176. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JR

/Henry W.H. Tsai/
Supervisory Patent Examiner, Art Unit 2184